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10/006,298	12/06/2001	Daniel Tapson	450110-03717	2646

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EXAMINER	
BHATNAGAR, ANAND P	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/006,298	TAPSON, DANIEL	
	Examiner	Art Unit	
	Anand Bhatnagar	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02/17/05*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 21-30* is/are rejected.

7)☒ Claim(s) *15-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/06/01* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05/20/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

1. Applicant's amendment filed on 02/17/05 has been entered and made of record.

2. Applicant has amended claims 1, 2, 11, 15, 16,18, 19, 21, 22-26, and 30. Currently, claims 1-30 are pending.

3. Applicant requests that the examiner consider prior art that was not considered before and copies are submitted with the amendment filed on 02/17/05. Examiner did not consider several prior art previously since copies were not provided and currently examiner did not find any copies of the prior art attached to the amendment filed on 02/17/05. Examiner requests the applicant to please resubmit the copies so they can be considered.

4. Applicant in essence argues, remarks 3rd full paragraph on page 10, "that a significant difference between claim 1 and Cox et al." (U.S. patent 5,930,369) "is that the transformer is an inverse transformer, as recited in amended independent claims 1 and 21." Examiner disagrees and further this is a new limitation in these claims. Claim 1 now recites "an inverse transformer for transforming transform domain data into spatial domain data" and claim 21 now containing a similar limitation. The applicant has a means called an "inverse transformer" for transforming transform data into spatial domain data. While Cox et al. has an equivalent means, which is the lens (fig. 7 element 58 and col. 14 lines 1-14), performing the same function as applicant's inverse transformer wherein the watermark, read as transfer domain data, is undergoing

transformation into spatial domain. Examiner equates the lens of Cox et al. as the inverse transformer of applicant's instant invention since their functions are equivalent, as now claimed in the claim limitations.

Applicant further argues, on page 11 1st full paragraph, that though the lens of Cox et al., fig. 7 elements 54 and 58, are called spatial transform lenses, they convert images from a spatial domain into a transform data and applicant cites col. 14 line 3 to show this. Examiner in his office action pointed out lines 1-9 in column 14 in the prior art of Cox et al. showing the description of the lenses. The lines cited in Cox et al., by the examiner, are the following:

> "In FIG. 7, data to be watermarked such as an image 52 is passed through a spatial transform lens 54, such as a Fourier transform lens, the output of which lens is the spatial transform of the image. Concurrently, a watermark image 56 is passed through a second spatial transform lens 58, the output of which lens is the spatial transfer of the watermark image 56. The spatial transform from lens 54 and the spatial transform from lens 58 are combined at an optical combiner 60."

Here, it clearly states that the output from these lenses, elements 54 and 58, is the spatial transform of the image. Nowhere, does it state that the output of these lenses is a transform domain. Further, applicant does not state in his claim language what is his transform data which is being inversely transformed into spatial data. Is applicant's "transform data" spatial data, frequency data, or spatial frequency which is being inversely transformed into spatial data? Further, in fig. 7 of Cox, after the image and watermark are spatially transformed they get combined at element 60 and then the watermarked image, at element 62, undergoes an inverse spatial transformation. If the data at element 60 is not

spatial data then how can you perform an inverse spatial transformation at element 62?

The last argument, last paragraph on page 11, made by the applicant is that "the present invention, as claimed in claim 1, has no inverse transform processor operable on the watermarked data representation, nor does it require one because the combiner forms the watermarked data in the spatial domain." Examiner disagrees. See above argument. Further this is not in the claim language. Applicant is arguing more than what is in the claim language, of applicant's instant invention, to which the examiner has given the broadest reasonable interpretation. Examiner refers to the rejection below.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14 and 21-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Cox et al. (U.S. patent 5,930,369).

Regarding claim 1: Cox et al. discloses an apparatus comprising:

a transformer for transforming transform domain data into spatial domain data (fig. 7 elements 52-58 and col. 14 lines 1-9, wherein the image data,52, and

the watermark image data, 56, are transformed into the spatial domain by the transformers 54 and 58, respectively. The image data and the watermark image data are read as the transform domain data because this is data which is going to be transformed); and

a combiner for receiving material and combining said spatial domain data with said material to form data embedded material (fig. 7 element 60 and col. 14 lines 8-11, wherein the spatially transformed image and watermark image data are combined by the combiner, 60).

Regarding claim 2: The apparatus wherein said transformer receives said transform domain data and transforms said transform domain data into spatial domain data (fig. 7 elements 52-58, see claim 1).

Regarding claim 3: The apparatus wherein the transform domain data is watermarking data (fig. 7 element 56, see claim 1).

Regarding claim 4: The apparatus wherein said material is one or more of audio material and video material (col. 5 lines 48-50).

Regarding claim 5: The apparatus wherein said material is data material (col. 1 lines 13-16 and col. 5 lines 48-50).

Regarding claim 6: The apparatus wherein said transform domain data comprises a Pseudo Random Symbol Stream modulated by information to embed in the material (col. 6 lines 28-32, wherein the watermark is random and spread throughout the image. This is read as Pseudo Random Symbol Stream).

Regarding claim 7: The apparatus wherein said data comprises a Universal Material Identifier (UMID) (col. 5 lines 45-50, wherein the watermark contains a unique identifier which is read as a UMID).

Regarding claim 8: The apparatus wherein said material and said spatial domain data both comprise a digital bitmap. Cox teaches to place a digital watermark in an image but does not teach to create a digital bitmap to embed a watermark. Creating a digital bitmap for watermarking is well known in the art in order to know where to place a specific size watermark and the best location to place it in. Examiner takes OFFICIAL NOTICE.

Regarding claim 9: The apparatus wherein said transform domain data comprises a digital bitmap. See claim 8.

Regarding claim 10: The apparatus wherein said transform domain data comprises wavelet coefficients and said transformer is an inverse wavelet transformer (col. 7 lines 38-44, wherein a wavelet or DCT transform can be performed.).

Regarding claim 11. The apparatus wherein said wavelet coefficients comprises information encoded in coefficients in at least two bands in at least one level (col. 6 lines 26-38, wherein the watermark is spread throughout the image. Spreading the watermark throughout the image results in different and/or the same regions of the image data may contain a watermark depending on the features of the image).

Regarding claim 12. The apparatus wherein said transform domain data comprises DCT coefficients and said transformer is an inverse DCT transformer. See claim 10.

Regarding claim 13: The apparatus wherein said combiner arithmetically combines said material and said spatial domain data (col. 9 lines 45-50 and col. 14 lines 7-10, wherein the watermark is arithmetically combined).

Regarding claim 14: The apparatus comprising:

a strength adapter for adapting the strength of said spatial domain data in dependence on said material (col. 9 lines 60-67 and col. 10 lines 1-15 wherein the scaling parameter, read as "strength adapter," alters the watermark values which is based on the image data, read as "material"),

wherein said combiner arithmetically combines said material and said strength adapted spatial domain data (fig. 7 element 60).

Regarding claim 21: See claim 1.

Regarding claim 22: See claim 1.

Regarding claim 23: See claim 13.

Regarding claim 24: It is rejected for the combination of reasons of claims 13 and 14.

Regarding claim 25. See claim 14.

Regarding claim 26: See claim 14.

Regarding claim 27: See claim 3.

Regarding claim 28: See claim 4.

Regarding claim 29: See claim 5.

Regarding claim 30: A computer program product comprising software code for performing the steps when said product is run on a computer (col. 13 lines 62-65 wherein this is electronic system, i.e. a computer or a processor performing the steps.

Allowable Subject Matter

6. Claims 15-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Bhatnagar whose telephone number is (571) 272-7416, whose supervisor is Jingge Wu whose number is (571) 272-7429, Central fax is 571-273-8300, and Tech center 2600 customer service office number is 703-306-0377.

SAMIR AHMED
PRIMARY EXAMINER

AB

Anand Bhatnagar

Art Unit 2623

September 20, 2005